

REVIEWS.

ART. XV. *De la Non-existence du Virus Vénérien, prouvée par le raisonnement, l'observation et l'expérience; avec un Traité Théorique et Pratique des maux Vénériens, rédigé d'après les principes de la Nouvelle Doctrine Médicale.* Par L. F. R. A. RICHOND DES BRUS, Du Puy, (Haute-Loire,) Docteur en Médecine de la Faculté de Paris, Ex-Chirurgien aide-major à l'Hôpital Militaire de Strasbourg, Associé Correspondant de la Société Royale de Médecine de Bourdeaux, de celles de Toulouse, Metz, Strasbourg, et Correspondant de la Société des Sciences, Arts et Agriculture d'Agen. A Paris, 1826. Vols. II. 8vo. pp. 883.

THE first quarter of the nineteenth century, will stand conspicuous in the annals of medicine, for great changes in the pathology and treatment of diseases. No subject has perhaps profited more by the revolution than that of venereal complaints, as no other was ever more obscured by errors, or tramelled by imposing dogmas. The authority of such names as HUNTER, BELL, and SWEDIAUR, had bowed down the profession to implicit faith and patient credulity. But these obstacles, ever in the way of improvement, are rapidly yielding to the successful efforts of enlightened individuals, whose reports regarded at first as heretical, have been subsequently viewed by the more ingenuous with complacency, and finally rewarded with a fair investigation. In this way firm believers in the specific and even chemical agency of mercury, as the only neutralizer and destroyer of the syphilitic poison, have come at length not only to a knowledge of its frequent inefficacy, but to a sense of the injury generally attendant upon its use, even when administered according to the most orthodox directions. Patients were found to survive, when mercurials were either dispensed with entirely or sparingly exhibited; nay, even to recover from local and constitutional ailments under other treatment. The old practice, founded upon the all-sufficiency of this agent over the poison, yielding to the force of these observations, the cure of lues, is now successfully conducted by many upon principles alike applicable to all diseases. In this country the number of those who have ventured thus far is yet comparatively small: but, counting upon the ordinary force of truth, and the ardour with which it is here sought after, we have no hesitation in declaring it as our firm belief, that in

a very few years a total reformation will have been effected in this branch of medicine, to the almost entire exclusion of the old, esteemed, fundamental doctrines.

Nor can we feel much wonder at the tenacity with which the old opinions relative to venereal affections have been adhered to, when we consider the weight of the chief authorities that founded and sanctioned them. Some of these were true disciples of the Baconian school, regulating their course by no other landmarks than those established by nature, and ascertained by observation and experiment. For such men with such guides to fall short of the attainment of truth, shows the narrowness of the limits which circumscribe human genius, and whilst it warns us against too implicit faith in any names or authorities, should at the same time make us cautious even of our own conclusions and opinions.

The freedom of inquiry now spreading on every side, we hail as the power that is to redeem the followers of the healing art from much of the opprobrium they have been made to sustain, and must continue to bear, until their department acquires a greater degree of that exactness which gives stability to the other sciences. It is the obscurity and uncertainty hitherto involving medical subjects, which have given rise to such perpetual discord among physicians, and invited open scepticism and jests; allowed empiricism to make her bold encroachments, mock at the angry fulminations and unavailing attempts employed to put her down, and frequently to triumph from the superior confidence awarded to her perilous but often successful nostrums. And to the same causes is it owing, that the evidence of physicians, upon points connected with their profession, have so little weight in a court of justice. It is only the dawn of a better intelligence that can free medicine from this perplexing and degrading situation. We have, it is true, advanced so far as to be able to smile at the hermetic science of the Egyptians, and that absurd love of mystery, which led them to worship the Ibis, because the space between its legs when parted asunder as it walks, forms a complete equilateral triangle. But having cast off the slough of superstition, we have yet to free ourselves from the dominion exercised over us by others, and submit more entirely to the guidance of our own common sense and observation. Certain it is, however, that we have the most difficult allotment of science assigned us for cultivation, seeing that whilst others are concerned in tracing the forms and relations of material substances, and the reciprocal actions of inert matter; it is our task to acquire a knowledge of the phenomena of life and to ascertain the operation of the most subtile agents, upon principles only

cognizable from their effects. But the greater the difficulty, the greater the glory of the achievement. HARVEY, the NEWTON of our science, has brought to light secrets hidden from the mind of man, for all we know, from his first creation, and the successful researches of BICHAT, in addition to what they have already accomplished, may yet develope operations in the animal economy, which have been consigned to the list of inscrutable first causes.

We must not, however, suffer our zeal for the general welfare of the science to lead us from the particular subject in which we are engaged.

The main points which M. Des Brus regards himself as having established in his treatise, are—1st. The non-existence of a specific venereal virus, said to have been originally carried from America to Europe; 2d. That venereal affections were known long before the period of the pretended importation; 3d. That the primary and secondary effects attributed to the specific poison, possess no distinctive characteristics and are not specific; 4th. That the manner in which the disease is introduced into the system, its seat, the causes of its reproduction and maintenance in defiance of the processes of assimilation and decomposition incessantly going on, are unknown, and have given rise to a multitude of ridiculous hypotheses; 5th. That the crowd of different remedies employed with advantage against syphilis, shows that its nature is not specific; 6th. That mercury does not always cure it, but sometimes aggravates and proves dangerous whilst it cures a great many diseases not venereal; 7th. That the non-mercurial treatment is favourable; 8th. That the development of the constitutional phenomena and even the existence of hereditary syphilis may be explained without reference to a virus; 9th. That these last may be cured without a specific; 10th. That all, in fine, which has been said of syphilis, complicated, disguised, etc. is altogether absurd. The reasoning, observation, and experience brought by our author in support of these various positions, will be presented in this article, so much of them, at least, as will serve to do justice to his arguments. But it may first be necessary to examine the pretensions of one who has made so bold an attempt, not simply to break through the limits prescribed by former authorities, but to overturn the whole foundation and superstructure upon which the doctrines and treatment of the disease had formerly rested, substituting others of an entirely new order.

M. Richond Des Brus, Doctor of Medicine, of the Faculty of Paris, and, as may be seen by referring to the heading of this article, member of various other medical and scientific associations, professes to

have devoted himself almost exclusively to the consideration and treatment of venereal affections. Charged with the direction of this department of practice in the Military Hospital of Strasbourg, he had there great facilities of observing them in all their varieties, of studying their causes, modes of development, characters, and peculiarities in different individuals and under different circumstances. He had likewise an ample opportunity of comparing the advantages obtained from the employment of the various modes of treatment. The simple assurance of his having collected with care eleven hundred cases, and treated nearly three thousand patients, is calculated to recommend the fruits of his observations to respectful attention.

On commencing the exercise of his profession, our author appears to have been completely tied down to the principles and practice then almost universally held by the profession. He confesses that he was too freshly imbued with the lessons of Professor CULLERIER, to think of any thing else than putting his instructions into practice. All his patients, therefore, were submitted to the mercurial treatment, and, with very little variation, the exact rules laid down in the works of SWEDIAUR and M. LAGNEAU, followed. If a soldier returned to his wards shortly after leaving them as cured, or presented an ulcer, bubo, or wart, which he pretended were not owing to a fresh infection, he immediately concluded either that the patient had eluded his vigilance, and neglected the mercurial course, or that sufficient mercury had not been administered for the destruction of the virus. At once, therefore, recourse was again had to the mercury, which was administered more freely than before.

"I was often," says he, "surprised at the tenacity of the virus, which in some patients resisted three or four courses of mercury, but authorized by my classic authors, attacked it each time with the same arms under different forms. I smiled when a poor conscript ingenuously told me that he had never any symptoms of syphilis, but that the surgeon of his regiment had nevertheless assured him that the excrescences which developed themselves about the anus, during his journey, were venereal. Have you ever been with women, I demanded? If he replied in the affirmative, I then unhesitatingly told him that he had contracted syphilis, d'enblée,* whilst if the answer was to the contrary, I gave him to understand that he might have received it from his parents. On both suppositions I pronounced it equally the pox, and felt tempted to address him in the phraseology I had long been accustomed to hear every morning from one of my old professors, 'you are rotten to the marrow of your bones.' He was thereupon condemned without mercy to pass through the routine of grand re-

* A term used to imply a reception of the virus into the system without any previous alteration or affection of the genital organs. By means of this ingenious invention the believers in a specific virus are enabled to slide over many difficulties, to their own satisfaction at least.—REVIEWER.

medies. In merely doubtful cases, I always preferred submitting my patients to a treatment of *precaution*, to leaving them exposed to the long series of evils which I believed the virus capable of producing."

There are few even at this day who will not recognize most of the views, here presented by our author, as their own, either at the present, or some other period of their lives. With but few exceptions they were certainly the reigning doctrines when we first walked the wards of hospitals in pursuit of instruction. Our author's account of the difficulties that so frequently arose from a rigid adherence to the old views, and the manner in which he was led on by observation to the adoption of others, is both interesting and replete with instruction for those who may yet be travelling in the old road. He found himself like all other practitioners, if they would but confess it, very much embarrassed in distinguishing between ulcers which were venereal and such as were not.

"I knew," says he, "that many lazy soldiers, to get clear of active duty, were in the practice of forming ulcers upon the prepuce by means of caustics, for the cure of which they were immediately placed under my direction. On the other hand, I was aware, that other soldiers, to avoid the mercurial treatment which they dreaded, attributed the ulcers, that showed themselves after impure connexion, to chafing, masturbation, or hard drinking. It therefore became equally important to avoid error, and becoming the dupe of such patients. At first, I fancied, that by the aid of signs laid down by authors as pathognomonics of syphilis, I could readily distinguish between the different species of ulcers which I had to manage. But in this I was mistaken. It often happened that I met with many ulcers upon the same individual, each of which presented a different aspect, one being syphilitic, another having no such appearance. Resorting to mercury as the touch-stone, I have seen those disappear which I did not consider venereal, whilst others with the characteristics became aggravated. If I only employed local emollient baths, and mucilaginous drinks, I sometimes saw veritable chancres speedily disappear, and all the symptoms give way. In other cases I encountered all the marks of syphilitic ulcers strongly determined, admired and pointed them out to the students present at my visit, and have been told the next day that the sores were produced and kept up by the diurnal application of caustic. It was, after many similar observations, that I was induced to regard the various forms presented by ulcers, as the products of irritation diversified according to its intensity, duration, and seat, and to believe that the pretended symptoms of syphilis did not depend upon the action of a virus. In this manner was I convinced by my own observation, supported by the testimony of others, that ulcers of the glans, skin of the penis, and scrotum, have a different aspect from those of the prepuce, and that marks, such as callous edges, perpendicular cut, hardness at the base, &c. given as pathognomonics, rarely belong to these last."

Our author experienced further embarrassments from what he observed relative to the nature and characters of buboes, which he saw making their appearance after mild gonorrhœas, ulcers without the

specific aspect, and after superficial excoriations occasioned by mechanical violence. In all these cases, he found them the same. Regarding their development as similar to that which ordinarily attends irritation of the lymphatic ganglions, he often treated them in accordance with this view by the application of leeches and emollient poultices, and in this way procured the resolution of such as he had believed decidedly venereal. Even when these suppurated, and their edges ulcerated and became callous, they were cured by a treatment adapted to simple irritation. These observations led our author to think that syphilis in its primary stages ought to be associated with the ordinary phlegmasiæ, and receive the same treatment. But as yet he had not doubted the existence of a virus, but only considered the inflammation it occasioned as not specific, although he believed in the necessity of destroying the morbid principle or cause by mercury. Subsequent experience, however, led him to observe the frequent inefficacy and often injurious effects of this universal remedy, and to doubt its infallibility. "I was," says he, "forced to the conclusion that mercury had no direct action upon the virus, and did not neutralize it."

Upon the faith of these observations he was finally led to treat constitutional syphilis occurring in soldiers of delicate and irritable habits, in whom the use of mercury occasioned numerous inconveniences, by such other means as he thought would be judicious if no specific cause existed, and instead of the result being merely palliative, he was surprised to find cures. He even ventured to discharge these patients without the exhibition of mercury, and found that their cure was complete.

"What reflections," he observes, "did these new and unexpected observations lead me to! Can the cure be perfect, I inquired of myself? Will not the poison give rise to new accidents? But does this virus which occasions me so much embarrassment really exist? And am I not frightened by a phantom? It is true all authors admit it, but all the facts which I have gathered are opposed to the principles which proceed from its admission. And is their testimony of no value? Having once doubted, my imagination set to work, and I sought by every possible means to gain new lights. For this purpose I made fresh observations. I imagined that the virus did not exist, and endeavoured to account without it for the phenomena attending on syphilis. I treated patients without mercury, and read with a spirit of scrutiny and suspicion those authors whom I had until now believed to the letter. I examined the basis of their theory, traced their most accredited opinions back to their sources, and learned from these investigations that authors have successively copied from each other, admitted the existence of a venereal virus without sufficient proof, and that the whole prevailing theory rested upon a sandy foundation, susceptible of being swept away at pleasure."

We have been the more inclined to present the train of observations and inquiries which ultimately led our author to change his opinions, inasmuch as the account furnishes a history of the experience of many others who have been interested in similar investigations. It is hardly necessary for us to say that many of his tenets have long been advocated in this country, though as before stated, by comparatively few. We would not therefore have it supposed that we present them as new and unknown, although some of them will doubtless be recognized as such.* But these doctrines, though founded upon the firm basis of experience and reason, have hitherto been so generally sacrificed and forsaken for those of the old school, that they will, in the shape presented by our author, gain new force, and bear down obstructions too strong to be removed by former well-directed but less regular attacks.

Notwithstanding the entire change in his views, M. Des Brus was still for a while bound down to an observance of the old routine practice, being at the time of his conversion obliged to conform to the orders of a surgeon in chief. The appointment, however, of this superior to another station, left the field entirely open to Des Brus, and he was not long in seizing upon the advantage. Accordingly he put almost all his patients upon a treatment without mercury. Under the name of saccharine powder he administered pulverized sugar to them in the form of glosso-palatinal frictions, watching to see that they used it with sufficient confidence to tranquillize their minds, and believe the medicine indispensable for their cure. The results were most satisfactory. Primitive as well as secondary symptoms readily healed, and relapses were no more frequent than after the old method, inconveniences were rare, and the general health less impaired.

"The reader," says he, "will judge of the importance of these results by the numerous facts which he will find in this work. Experience has sanctioned my method: let him try it, and he will be easily convinced of my veracity."

Of one thousand six hundred and fifty-five patients admitted by him

* As early as the year 1808, Dr. Rousseau, of Philadelphia, published in the fourth volume of the Philadelphia Medical Museum, views relative to venereal affections closely allied to many which are brought forward by Des Brus. Dr. Rush, in his Comments upon Sydenham, has most happily anticipated the present era, by observing that he had no doubt the time would come, when syphilis, like all other diseases, would be treated according to general principles. Dr. Chapman's opinions relative to venereal affections have in many respects been for years in accordance with those of the new school. Dr. T. Harris, of the U. S. Navy, has shown himself a very able advocate of the rational plan of treating syphilitic affections.

into his wards from March, 1823, to August, 1824, three hundred and forty-two were subjected to the mercurial treatment, that he might be able to compare the effects of the two plans.

We shall conclude this account of our author's introduction with a passage relative to the prejudice and opposition which those have to contend with, who dare to step aside from the old beaten track and strike out paths of their own.

"In openly attacking," he observes, "a theory which four centuries of observation seem to have rendered unshaken, which has been sanctioned by the most illustrious men whose opinions have ever enjoyed popularity, I am sensible that I expose myself to the choler of the numerous partisans of morbid entities, vices, and a virus, and to be treated as a worthless blasphemer. For I know with Madame De Staël, that all opinions differing from the prevailing spirit, whatever this may be, offend the vulgar, and that human reason habituates itself to servitude even in the field of philosophy and the sciences. But what care I for the clamours of such persons; provided I succeed in gaining the attention of the industrious and impartial student, and cause some practitioners to doubt, my objects will be accomplished. It is doubtless very difficult to convince prejudiced men, and I cannot flatter myself with being able to effect alone the useful revolution which the state of the science demands; but other practitioners possessing more influence over public opinion will at length raise their voices to overthrow that theory which is a shameful monument of the credulity of our predecessors. I believe the moment favourable for calling the attention of physicians to this obscure point of medicine: minds are at present eager for truths, weary of hypotheses, and attach importance to nothing but well-attested facts."

The title to the first chapter of our author, "*la syphilis n'est point une maladie nouvelle*," lays open a highly interesting field for inquiry, but one which has of late years been so ably examined, as to leave little room for new research, or for doubting the position of our author. Was the point once decided in the affirmative, that there really exists no specific venereal virus, it would render attempts to establish the position entirely superfluous; and, were there no other reasons of sufficient weight to disprove the American origin of this malady, the lights of history alone would afford ample demonstration. In the discussion of this matter we are sure that our opinions rest perfectly free from the influence of national prejudice. We do not feel that the honour of the western hemisphere is at all at stake in the decision, and could the American origin of this very unseemly disease be clearly substantiated, the only reflection we should perhaps be tempted to make in reference to the subject, might be, that the new world was not altogether exempt from that alloy of evil which a wise Providence has every where else blended with his choicest favours.

As however we cannot expect that our own conviction will be unreservedly admitted by others holding a different faith, or whose minds have never been completely set at rest upon the question, we shall proceed to state the most conclusive evidence which our author has brought to bear upon the question.

Previously however, we beg leave to refer to a few of the leading speculations of former days, to show that such existed, and were doubtless held in equal veneration with those of later date. Thus in 1519, CORADIN GILINI pretended that as a consequence of the conjunction of Mars and Jupiter, on the 16th of January, 1496, in a warm and humid sign, there arose vapours from the earth and water, which, inflamed and put into action by Mars, corrupted and changed the air, and engendered those bad humours which occasioned the disease. But the greater number of the believers in astrology were disposed to lay the blame upon the eclipses of the sun and moon. Some, who perhaps entertained less faith in the influence of the planets, started the singular opinion that the true source of the poison was to be found in the wine casks of Somma, a village near Mount Vesuvius. The Spaniards, they say, compelled to retire from this place, added to the wine they abandoned, all the blood which they could draw from the sick in the hospital of St. Lazarus, a sophistication which rendered the liquor poisonous, so that it communicated disease to those who succeeded them. This fable is however eclipsed by another, maintained by one LEONARDO FIORAVENTI, who had the facts from no less an authority than the son of a butcher to the army of ALPHONSO, king of Arragon, which prince, as is well known, carried on a long war against the duke of Anjou. In this state of things the provisions on each side becoming at length exhausted, the sutlers of the two armies, impelled by the desire of gain, had recourse to supplies of human flesh; from the eating of which the disease in question originated. In corroboration of this opinion, the author asserts, that he had made many experiments upon dogs as well as pigs, the result of which was, that animals nourished upon food of their own kind, have their bodies covered with pustules, lose their hair, and perish miserably. These last observations were subsequently confirmed by other authorities, and, with the preceding, amply suffice to show the darkness which then overshadowed the medical art, and the ineffectual groping of its followers. Under these circumstances, it is no way surprising that when SCHMAUSS, a professor in the school of Salzbουργ, in 1518, started the new idea that the disease was brought from America, upon the ground that this country alone produced guaiacum, then regarded as the specific provided by nature for its

cure, he should have gained so many adherents, since the wild theories, then in vogue, could only have been entertained for want of better. Its plausibility, at least, is amply attested by the fact, that it has kept its ground very generally ever since, and even now has its numerous and firm advocates.

The opinion of SCHMAUSS, as established for the most part by the influence of GIRTANNER and ASTRUC, sets forth that syphilis was unknown in Europe until introduced by the followers of Columbus, who had received it in their intercourse with the savage women of the New World. That many of those who had contracted the disease either in America or Spain, joining the army of Gonzalvo, took the virus with them into Italy and communicated it to the prostitutes of Calabria and Naples, by whom it was transmitted to the French army, after which it soon spread over the rest of Italy, to France and other parts of Europe.

Let us examine how this general belief is sustained by historical testimony. On the 4th of March, 1493, Columbus debarked from his first voyage, at Val-de-Parayso, near Lisbon. After spending nine days in the Portuguese Capitol, he set out for Seville, where he arrived on the 15th of the same month. From thence he went to Barcelona, and arrived there about the middle of April. Now it is distinctly recorded that the Spanish army under Gonzalvo, did not arrive in Italy until the month of May, 1495, before which time we have the clearest accounts of syphilis being in Rome, namely, in 1493, as recorded by INFESSURA and other Italian writers of that period. It is, therefore, impossible that the troops of Gonzalvo should have been the first to carry it into Calabria, and, as we think, totally incredible that in the course of three months after the arrival of Columbus and his followers, (the number of which, originally only one hundred and twenty, had been reduced by the establishment of a colony of thirty men on the island of St. Domingo, and other causes,) it should have been spread by them to Berlin, Hallé, Brunswick, Meclenburgh, Lombardy, Auvergne, and other countries, where it is demonstrated to have existed, by the accounts of ZORELLA, ALEXANDER BENOIT, CAPREOLI, FULGOSI, SABELLICO, and others.

For proofs that the various forms of syphilis were known to the ancients, M. Des Brus refers to the work of Professor GRUNER, which contains a crowd of passages relative to the subject, extracted from the Greek, Latin, and Arabian writers. He also thinks that an attentive perusal of the books of HIPPOCRATES, *De natura muliebri*, *De morbis mulierum*, and others, will lead to a conviction that the descriptions there given of ulcers and other affections of the genital

parts, suppurations of the inguinal glands, etc. correspond perfectly with the symptoms now styled venereal. In support of this disputed point, we shall cite but few, of many authorities, as quite sufficient for its establishment. The first is CÆLSUS, who in his sixth book and eighteenth chapter, describes, with an accuracy leaving no room for doubt, the most ordinary effects, both primary and secondary, arising from impure sexual intercourse, among which are phymosis and paraphymosis, attended with discharge and ulcers, the last being particularly mentioned as situated on the interior surface of the prepuce, on the glans, and penis itself. The same prescriptions which he advises for the treatment of some of these affections, he likewise speaks of as applicable to the ordinary secondary symptoms affecting the tonsils and palate, together with ulcerations of the mouth and nose. "Eadem autem compositio tonsillis, uvæ madenti, oris nariumque ulceribus accommodata est." The whole chapter is replete with evidence in favour of our position.

The second reference we shall make is to the Bible, where, in addition to the attestations furnished in other parts and frequently quoted, we would call the attention to a comparison instituted by the psalmist between spiritual and bodily infirmities, in the following expressions.

"There is no soundness in my flesh because of thine anger; neither is there any rest in my bones because of my sin. For my iniquities have gone over my head: as an heavy burthen, they are too heavy for me. My wounds stink and are corrupt because of my foolishness. I am troubled; I am bowed down greatly; I go mourning all the day long. For my loins are filled with a loathsome disease; and there is no soundness in my flesh. I am feeble and sore broken: I have roared by reason of the disquietness of my heart. My heart panteth, my strength faileth me: as for the light of mine eyes, it also is gone from me. My lovers and my friends stand aloof from my sore; and my kinsmen stand afar off."*

If there be no allusion in this passage to that "loathsome disease of the loins," of which we are treating, we must confess ourselves greatly at a loss to conjecture, what other bodily disorder, proceeding from "sin and foolishness," and thus situated, could have been intended.

Of the writers of comparatively modern times, who have treated most unequivocally of venereal affections, we shall cite but two or three, as quite sufficient for our purpose.

RHODIUS, in his notes to SCRIBONIUS LARGUS, mentions the death

* Psalms, xxxviii. v. 3, 4, 5, 6, 7, 8, 10, 11. Other passages bearing upon the same point may be found in Leviticus, chapters xiii. xv. xx, and Numbers, chap. v.

of a prince of Padua, in 1355, in consequence of an inveterate disease contracted in the privy parts from excessive intercourse with women.

SALICET, a surgeon who lived in 1270, devotes a whole chapter to pustules and other corruptions which manifest themselves upon the penis and around the prepuce, arising from intercourse with public women.

GARDONNIUS, who lived in 1303, treats clearly of diseases arising from impure sexual connexion. In a chapter entitled *De apostemate in inguinibus*, he says, that the affection called bubo of the groin, is occasioned either by a cold disease thrown from the liver towards parts which are weak and empty, or by a warm influence, as when a man happens to have his penis corrupted from intercourse with an uncleanly woman.

With respect to the true source of syphilitic complaints, no one, we think, who examines the subject with candour, and the help of the lights recently shed upon it by able investigators, will be able to believe that the title so long vested in America as the original fountain, can be maintained with the slightest plausibility. The assertion of the celebrated Astruc, that "syphilis is never engendered in Europe, neither by bad regimen, nor by any abuses of nature, but is kept up by foreign leaven, which perpetuates or rather renews itself continually," we consider as baseless and erroneous in the extreme. Well-attested instances of the spontaneous production of the various forms of syphilis, are in fact so extremely numerous as to make one hesitate which to cite first. Not a few have fallen under our immediate observation, and we have consequently long been a firm believer in their spontaneous origin, from too active excitement of the genital organs, or other causes with which we may not be acquainted. Venereal affections are doubtless coeval with the vice of promiscuous and excessive venery, and may be regarded as an effect of that undeviating law of nature, by which evil consequences are made the invariable attendants upon excesses. Could it indeed be reasonably supposed, that a female should have frequent intercourse with several men, and experience no inconvenience from thus committing violence upon nature, and interfering with her most important function. A different result might certainly be expected. Organs so admirably formed and exquisitely endowed, could not escape injury from mechanical violence with other causes of excitement. A high degree of irritation and even inflammation must necessarily ensue, and the secretions from the parts be changed into foul and acrimonious discharges, rendered perhaps still more so from intermixture with the most acrid of

animal secretions. Who will deny that these consequences, with all the train of ulceration, etc. cannot take place without the necessity of the American leaven. Even before disease has manifested itself by any external appearances, the over-excited genital organs may impart to their secretions virulent properties, capable of producing active disease, when applied to a very sensitive and irritable surface on another person. There is, in our opinion, no security against venereal contagion, where either of the parties is addicted to frequent promiscuous intercourse. Appearances of health, under these circumstances, are never to be trusted.

But why has the last of the fifteenth century been so generally fixed upon as a period when syphilis made its first appearance in Europe? The following reasons we think may be given in answer to the question. It would appear from various accounts written at the time, that exanthematous diseases prevailed extensively, and particularly in the southern parts of Europe. As the most authentic records represent the age as one of extreme licentiousness, it is natural to infer that venereal affections were very prevalent, and that eruptions usually attendant upon them may have been often confounded with cutaneous diseases arising from other causes. The term syphilis, the derivation of which is quite uncertain, was no doubt applied in the times to which we allude, to designate epidemic exanthematous affections, though since confined to those morbid symptoms arising from impure sexual intercourse. It is our opinion that new diseases much less rarely occur, than that old ones are lost sight of, or cease to be clearly recognized, either from changes in the nomenclature of our predecessors, or the obscurity of the terms and imperfect descriptions they have left us. Upon these suppositions only can we satisfactorily explain the accounts we have of syphilis prevailing as an epidemic, and acquiring successively the popular designations of Neapolitan, French, and Spanish disease.

We will conclude our remarks upon this part of M. Des Brus's treatise, by observing that the proofs of the existence of all the forms of syphilis prior to the discovery of America, are sufficient to overwhelm all the arguments to the contrary ever brought forward by Schmauss, Girtanner, Astruc, and all their adherents. Those who feel curious to inquire more into the subject, we would particularly refer to the work of M. Des Brus, and also to the able "*Historical and Critical Observations on Syphilis*," by Jourdan, a translation of which into English, may be found in the third volume of the *Philadelphia Journal of the Medical and Physical Sciences*.

We have now arrived at a subject much dwelt upon by M. Des Brus.

and one for which we anticipate much greater opposition, than any other topic connected with these investigations—namely, *the non-existence of the venereal virus*.

The existence of such a matter or substance as that called the venereal virus, has until very lately been so firmly and universally believed, that persons venturing to doubt it ran more risk of being denounced as visionary and sceptical, than of attracting any respectful attention to their opinions. When it is considered that the actual being and presence of a specific poison, constitutes the basis of all former pathology and practice in syphilis, it may be readily conceived that the consequences of the contest are of the highest importance, as the establishment of the new doctrine would be like erasing from a tablet the useless records it contained.

But lest it might be inquired what we mean by the term *specific virus*, we will anticipate the question by answering, a morbid secretion, which applied to the animal system, produces a peculiar action, similar to that by which it was generated, manifested by a regular and uniform train of symptoms. As examples we refer to the secretions in the well known diseases variola, vaccina, and psora.

Let us see what success is likely to follow the reasoning, observation and experience which may be advanced to disprove the existence of that morbid matter asserted to have been first introduced into the old world from America, and which has been characterized by various writers as an inflammatory, acrimonious, corrosive, acid, alkaline, glutinous, sulphurous, and even electrical substance.

The first argument advanced by M. Des Brus in favour of his opinion is founded upon a position laid down by Cicerō in his second philippic, namely, “that nothing is less worthy of a reasonable man than to oppose against one with whom he may have a dispute, an opinion which the other has only to deny in order to stop short all opposition in his opponent, and to show that it ought to be rejected, seeing that it only reposes upon a fable destitute of all proof.” Upon the strength of this classic logic, M. Des Brus calls upon the believers in a virus to demonstrate its existence, and to say what it is, and where it is.

The *contagion* of venereal affections affords, perhaps, the strongest proof in favour of the existence of a specific venereal virus. But it must be observed, that the form communicated is not, as has been strenuously maintained, always of the same character with the original affection, individuals contracting their diseases from the same source, often presenting the most different trains of symptoms. As well, M. Des Brus thinks, may it be argued that the coryza attending

inflammation of the mucous membrane of the nasal cavities, depends upon a specific virus, because the secretion applied to the same membrane of healthy persons, will, as he asserts, excite a similar affection. The same results follow the application of a morbid secretion from any other mucous surface when applied to one in a sound state. That of the eye in purulent ophthalmia is adduced as a familiar illustration. In these cases it is manifest that the secretory organs are deranged and their discharges altered, and that they acquire from inflammation qualities sufficiently acrimonious to produce an irritation in the parts to which they are or may be applied. Why, it may be asked, may not the same thing take place in venereal irritations.

M. Des Brus cites very many interesting cases to prove that the syphilitic affections propagated to several sound persons who may have had connexion, about the same time, with the same infected person, unlike what might be expected from the direct application of a specific poison very often differ greatly from each other. Of the truth of this our own observation has furnished the most ample evidences. Appealing, however, to the examples cited by him, we shall at the same time present his rationale as illustrating very clearly the views he takes of the subject.

"Six friends," says he, quoting from Vigaroux, "after a hearty repast, had connexion with the same girl, who communicated the pox to them all. The disease, however, manifested itself among them with different symptoms. Two of them had chancres and buboes; two others, gonorrhœa; the fifth had a chancre; and the sixth a single bubo. One of those who had chancres and buboes was soon cured by a regular treatment with frictions: the other with the same affection, had his bubo to suppurate, the skin to separate, become spongy and perforated. He became dejected, salivation took place; the submaxillary glands became engorged; the discharge from the chancre ichorous; he lost his strength, and sunk. He who had only a chancre, burnt it out, and experienced no inconvenience after marriage, his children proving healthy. Of the two who had gonorrhœa, one experienced it in its mildest form, whilst in the other, on the contrary, it was attended with exceeding virulence, and resisted the efforts made to cure it, for ten months."

In relation to this case, M. Des Brus observes—

"In vain may we seek to account satisfactorily for these different phenomena, otherwise than by referring to the different excitability of the several patients, and to the various degrees of inflammation occasioned by the connexion. This affords the only rationale, which will apply equally well to them all, whatever may have been the irritating principle which produced the disorder. Let us suppose that these six individuals had been exposed to the contact of certain vegetable juices, alkalies, acids, corrupted animal matters, etc. The effects produced we should account for thus:—With two of the persons alluded to, the irritation occasioned by the excitant predominating upon the

extremity of the mucous coat of the urethra, would cause this to inflame, and it being the property of inflammations of the mucous surface, to give rise to a mucous discharge in greater or less abundance the affection we call gonorrhœa would have been produced. One of these patients presenting a greater excitability of this part than the other, or the inflammation having manifested itself with more violence, the result was a difference in the intensity and duration of the disease. With two others, either from greater sensibility of the glans, or the more intimate application of the irritating fluid to this part, ulcers were produced upon it; the irritation propagated along the lymphatic vessels to the inguinal glands, gave rise to a bubo, in the same manner that we see swellings of the sub-maxillary glands occasioned by salivation. In the first the symptoms were perhaps dissipated by the mercurial treatment producing upon the excretory organs and lymphatic system in general, a true revulsion to them of the irritation seated upon the genital organs. With the other, either because the glandular inflammation was too profound, or that it had been aggravated by the stimulus of the mercury, suppuration took place, the cellular sub-cutaneous tissue was destroyed, and the skin left without support, sunk down—a prey to disorganizing inflammation, it wasted away, becoming thin and perforated. On the other hand, irritation of the salivary organs was produced by the mercury, the mouth became tumid, as well as the sub-maxillary glands. The gastric viscera participated in the excitement as happens on ordinary occasions. Hence loss of strength, ichorous suppuration, dejection, and finally death. With the sixth, the excitement of the penis not sufficient to establish an ulcer, was nevertheless capable of exciting sympathy in the inguinal glands, which, predisposed to irritation, swelled in the same manner that they are seen to do after a prolonged march.”

Should the believers in the specific virus attempt to explain the varied effects observed in the cases just related, by ascribing them to the different dispositions of the individuals, we would reply, such indeed *may have been* the case, but why resort to obscure hypothesis, to explain what may be satisfactorily understood without.

But how can we resist the positive proofs of a virus furnished in the experiments of Mr. Hunter, who, by inoculating with venereal matter, produced that disease in sound persons. Those who will take the trouble of examining the records of these experiments with attention, will not, we think, feel bound to believe in the existence of a specific venereal virus. All the results observed will admit of the easy mode of explanation which has already been applied so satisfactorily by M. Des Brus, to the solution of other cases. Many experiments of inoculating with venereal matter, similar to those of Mr. Hunter, have been made in France, by MM. DUBLED, BERTIN, DUPAU, DES BRUS, and others, which show that the matter of gonorrhœa and chancres rarely produce any lasting effects, when applied and even inserted into other tissues, except those with which they usually come in contact during the act of coi-

tion. Venereal pus, it is true, *may* become the cause of an ulcerative inflammation, but under these circumstances the phenomenon is *purely local*, and like other inflammations, may give rise, either through sympathy, or continuity of tissue, to various changes in the neighbouring or distant organs.

It would appear that the believers in a virus have in France, lately availed themselves of the unhappy results of an experiment by inoculation, for the support of their position, which, like certain religious appeals, are calculated to take stronger hold on the prejudices and feelings, than on the reason. This circumstance we shall relate in the words of M. Des Brus, giving at the same time his comments.

"In opposition to my reported experience, there will doubtless be cited the results, obtained by three young physicians who inoculated themselves, which have been pompously announced in the medical journals. Each of the three, it is said, made a puncture in the arm with the point of a lancet, charged with syphilitic matter. In one, swelling of the axillary glands took place, which, treated by antiphlogistics alone, went on to suppuration, and produced considerable injury of the axilla. In the second, the puncture inflamed and ulcerated; a chancre presenting *all the venereal characteristics*, established itself, and made extensive ravages. But admire how far the love of the marvellous will carry us: it is pretended that this young man, after consulting a professor of the medical school, who told him that the ulcer was *venereal*, and that he must resort to mercury, went into the hospital and opened the crural artery!!

"What, this young physician, who, inflamed by the laudable desire of throwing light upon an obscure point of science, had not scrupled to try upon himself an experiment reputed dangerous, and who had been led by observation to question the evidences of a venereal virus, to lose both reflection and courage so as to be driven to commit suicide; merely too because a professor had told him he had the pox! And what great matter was there even if it had been so? Could he not have resorted to mercury for its removal, if, confiding only in the edicts of the professor, he was not able to rid himself of the idea that the employment of that medicine was absolutely necessary? Or, was he determined by shame or vexation not to survive a defeat? The supposition cannot be admitted, for what did the ulcer with which he was affected prove? Nothing more than that the pus applied had acted as an irritant. Now it is not probable, that before submitting to the inoculation, he could have been ignorant of the circumstance, that inflammation often gives to the fluids secreted on parts where it is seated, acrimonious and irritating properties: that accidents often occur from scratches made by instruments impregnated with the sanious humours of a wound or dead body: and he ought to have been familiar with many facts similar to the following, reported by M. Bégin. Opening, with M. Broussais, the body of a man who had died of gastro-enteritis, accompanied with adynamic symptoms, M. Bégin experienced an insupportable sensation of burning, in consequence of having touched the intestinal contents, and had likewise a considerable swelling of the hand, as well as an abscess upon one of his fingers, although neither he nor M. Broussais, *who experienced similar inconveniences*, had been wounded by the knife. Every thing, therefore, conspires

to render it likely, that the subject of this experiment was driven to suicide by other causes."

The case of the third young man is reported to have presented *divers positive symptoms of a venereal infection.*

"It is greatly to be regretted," says M. Des Brus, "that these young men have offered no conclusions upon their observations and experience. Their testimony would then have had more weight, and might have served to confirm or disprove the conclusions which it has been attempted to draw from them."

M. Des Brus thinks that the symptoms exhibited in these three experiments, do not at all establish the existence of a virus. That, in the axillary engorgement of the first, there was nothing extraordinary. Among other circumstances referred to, in order to explain the phenomena, he cites some of interest from his own personal experience. On one occasion, having received, whilst opening a dropsical subject, a slight cut upon one of his fingers, pain in the arm soon ensued, together with violent inflammation, and swelling of the glands in the axilla, which were subdued by leeches and other appropriate means. These symptoms were attended with an acute gastro-enteritis, produced from the ganglionic irritation, referred to the mucous coat of the intestinal canal, succeeded by a pustular cutaneous eruption on the trunk of the body, so that it was only necessary that he should have been inoculated with venereal matter, to have constituted a case of syphilis. All this and more is adduced, to prove that the axillary engorgement in the young experimenter, did not proceed from the introduction of a specific virus.

The ulcer which manifested itself on the second, was nothing uncommon, since a splinter, or the acrid juice of any vegetable might have produced the same effects. As to the characters of syphilis, M. Des Brus demands what else they are than the ordinary products of irritation. So much, therefore, for the evidences of a virus furnished by inoculation.

It has been our own lot to witness many instances, in which symptoms have occurred from other causes, not to be discriminated from those ensuing to venereal affections taken in the usual way. Of these we will take the liberty of mentioning one, the case of a widow lady of cachectic habit, who was suddenly attacked with an alarming sloughing ulcer just above the heel of the right foot. After the loss of considerable substance, the ulcer healed under the use of generous diet and tonics. About two weeks afterwards, however, a swelling took place in one of the right inguinal glands, which proceeded rapidly to suppuration, and on being opened, discharged most abundantly a thick pus. This soon got well under the treatment previously prescribed.

About a week or ten days after the removal of the inguinal affection, she was attacked with severe colick, accompanied with spasms, and strong indications of a disordered condition of the digestive organs, soon after recovery from which, she went into the country, staid about three weeks, and returned apparently in better health than she had enjoyed for a long time. In a few days, however, she complained of soreness about the bridge of the nose, where there existed a considerable redness. A wash of lead water and laudanum was directed externally, and internally the decoction of sarsaparilla, along with colomba. A plain nutritious diet was enjoined. The soreness was relieved and the redness disappeared in the course of three or four days, and we now thought every thing right again. In about three weeks, however, we were called upon by the same lady to witness a papular eruption on the hands and arms, which, however, soon disappeared, and proved the finale. We regard this case as illustrating most happily the chain of connexion subsisting between the various tissues and organs of the body, and the manner in which impressions are transmitted from one to another. In a cachectic state of the system, produced most probably by a derangement of the digestive organs, the heel became the focus of morbid irritation, probably first set in motion there by some injury too slight to be noticed. From thence it was propagated successively to other parts, according to laws regulating the phenomena of diseases. Had we not witnessed the primary affection, and our patient been in any degree susceptible of a suspicion of venereal indulgence, (which was altogether impossible,) no human power, we believe could at that time have convinced us, that the venereal virus was not at the bottom of the case. Here then we have the usual consecutive phenomena attendant on venereal affections, without the presence of a specific venereal virus.

All who have possessed opportunities of paying much attention to venereal affections, must have frequently witnessed the transition of the inflammation and irritation attending upon simple gonorrhœa to the glandular system producing soreness in the lymphatics of the penis; swelling of the inguinal glands, testicles, etc. rheumatic affections of the muscular and membranous tissues, irritation of the mucous membrane of the fauces and other parts, cutaneous affections, etc. in fact, all the symptoms commonly observed to follow venereal sores. Now, if it can be demonstrated that a similar train of symptoms may be produced by other means, and entirely without the agency of venereal matter, it results that there is no necessity for the agency of a specific virus, in order to explain the rationale of syphilitic affections. We have seen a simple warty excrescence which ex-

isted on the prepuce for several weeks as the only evidence of an impure connexion, converted by the injudicious application of caustics and other means used for its removal, into a foul and irritable ulcer, deep, livid, surrounded by callous edges, and withal exceedingly obstinate to heal, giving rise subsequently to a tedious and inveterate train of constitutional symptoms. And yet such warts under ordinary circumstances are readily removed by simple applications, and seldom or never, according to our experience, occasion any other than mechanical inconvenience, unless some such violence as that above described, has been applied to the tissue. We have therefore no hesitation in believing that under such circumstances it is not a virus which does the mischief, but irritation and inflammation roused and determined in its natural direction, a doctrine which we think applicable alike to all manner of venereal affections.

M. Swediaur, the firm champion of a specific venereal virus, has reported a most admirable experiment performed upon his own person, which we think should have taught him different views from those he maintains in his work upon syphilis. By injecting a strong solution of sal. ammoniac a very little way into his urethra, he produced thus artificially a most virulent gonorrhœa, attended with a purulent discharge, ardor urina, nocturnal erections, chordee, irritable bladder, and all the usual concomitants. He was six weeks in performing a cure. The case, which is detailed at considerable length in his book, is well worth referring to.

Should we be asked whether we think M. Swediaur, with this artificial affection, was capable of communicating disease to a female by having connexion with her, we would unhesitatingly answer, yes; just as effectually as if he had originally derived it from venereal intercourse.

We find in books the most prolix descriptions of the various sores observed to proceed from impure coition. The nicest distinctions have from time to time been drawn between the genuine syphilitic and the spurious, and ingenious classifications founded upon their *sui generis* characteristics. An immense deal of talent and industry have been thrown away upon such fabrications. What has been styled the true primary syphilitic ulcer has been delineated with great accuracy by the genius of HUNTER. And yet a late writer, Mr. CARMICHAEL, who has admitted the distinction made by Mr. H. implicitly, with the most ample opportunities afforded him as chief of a large hospital dedicated to venereal complaints, has not been able with all his observation to find more than two or three legitimate Hunterian chancres in many years. It is therefore useless to comment upon the inutility of such

a distinction, particularly since it has been demonstrated over and over, that this kind of ulcer, contrary to the positive assertions of Hunter, Carmichael, and many others of great authority, can, like every other venereal sore, be cured without mercury.*

Upon the whole, the pretended characteristics of venereal affections which have served to edify the credulous faithful, and confuse the student and candid inquirer after facts, may be readily demonstrated to be nothing more than the ordinary effects of irritation and inflammation, modified by circumstances now well understood.

"The ulcer of the teguments of the penis, whatever may have been its origin, seldom bears any resemblance to that of the glans. That of the glans differs ordinarily from that of the prepuce, whilst those of that envelope frequently exhibit great variety of appearance, even at the same time, and in the same patient."

All this variation may be referred to the different degrees of intensity of the irritation or inflammation, and the length of time the ulcers may have existed. Their physiognomy is susceptible of great and rapid variation. These are points to which M. Des Brus has invited particular attention, and which he says will be ever confirmed by close observation of the phenomenon which succeed each other during the development of the ulcers. The original and progressive appearances of these primary affections are thus described by him:—

"They ordinarily proceed," says he, "either from a slight excoriation produced during coitus, from small white or reddish serous vesicles of the size of a millet seed or pin-head, and of an aphthous appearance, or from a minute pustule on the skin. These vesicles break, the fluid which they contain escapes, and sometimes we find the denuded surface exactly like that produced by the application of a blister, whilst at others it is of a milky white. The inflammation progressing, the sore becomes larger and deeper, extends more or less to other parts, and soon presents an aspect varied by circumstances. Sometimes the edges are thin, pale, and level with the surrounding parts; at others, on the contrary, they are hard, engorged, and elevated above the sore, particularly after the inflammation has lasted for some time: sometimes the centre appears red and granulated, or pale, fungous, and raised above the margins: sometimes excavated, and of a yellowish colour. In some cases a corrosive matter is secreted. The surface is at times perfectly even, or striated, ragged, and of a stellated appearance. Round or oval upon the prepuce, they are generally irregular upon the glans, elongated upon the frænum, round

* Notwithstanding, however, the distinctions and classifications adopted by Mr. Carmichael in his treatise upon venereal diseases, the practice which he inculcates, is upon the whole more consonant to reason and the results of recent investigations, than that laid down in any other English book with which we are acquainted.

or oval upon the skin. The irregularity in form generally augments with the progress they make."

After remaining a certain time, the ulcer generally produces a hardness of the part upon which it is situated. This hardness is sometimes like cartilage, and—

"I have often," says he, "seen the base of the prepuce forming a kind of firm and solid ring around the glans. The number of sores varies infinitely: sometimes there is only one, and then again a great many. The chancre of the genital organs is occasionally observed healing on one part, and at the same time attacking another, under every treatment that may be resorted to."

In fact, it cannot we think be denied, that all the appearances designated as the pathognomonics of primary syphilis have occurred, and may occur without the application of a specific virus. Neither is it to be doubted that those have greatly deceived themselves who have drawn such nice distinctions relative to the infallible characteristics, some of whom have even gone so far as to pronounce their dogmatical opinions upon the bare evidence of the odour exhaled by the pus. The truth is, many practitioners have themselves been the authors of the pathognomonic symptoms, which they have wrongfully charged upon the visionary existence of a *specific virus*, the most simple and harmless sores, having been converted by means of improper washes, ointments, escharotics, general treatment, &c. applied according to a certain routine, into irritable, obstinate, frightful, and most mischievous ulcers, which have not only committed ravages upon the tissues where they were first located, but brought other tissues successively into disorder until finally the whole system has been invaded.

The evidence of a venereal virus drawn from the occurrence of buboes, however strong it may seem at first blush, is altogether without weight when candidly investigated. Their presence in fact proves nothing more than that the irritation has extended from the tissues of the penis, either from continuity or sympathy, to the tissue of a neighbouring gland. They originate from similar causes in other parts of the body, most commonly in the axilla from some affection of the superior extremity or breast. The diagnostics, designating this affection as of a *genuine* syphilitic character, as it is termed, are equally fallacious with those applied for the same purpose to chancre. The labours of Astruc and all his followers in this work, when investigated with attention and candour, will be found vain and delusive.

Like attempts have been made to fix the characteristics of genuine syphilitic gonorrhœa, so that it may be distinguished from the spu-

rious kinds often said to be mistaken for it. But notwithstanding the great ingenuity displayed in the task, every unprejudiced person who will make the investigation for himself, will come to the conclusion that all the phenomena of gonorrhœa depend upon different degrees of urethral inflammation.

"Thus," says M. Des Brus, "in regard to inflammations of all other parts, we constantly observe a difference in the intensity of the pains, in the derangement of the functions, and in the colour and qualities of the excretions."

It is precisely the same case with gonorrhœa, which originating from similar causes and sources with the other forms of syphilis is, like them a genuine phlegmasia, curable upon the same general principles. Existing usually without any solution of continuity in the diseased tissue, it frequently gets well of itself, and seldom, comparatively speaking, affects the other tissues of the body to any considerable extent, unless when aggravated by peculiar circumstances. Then indeed its effects are transferred to other parts, and it runs its course after the manner of other venereal forms, attacking the testicles, inguinal glands, the mucous membranes of other parts, the muscles, fasciæ, skin, &c. Who that has frequently been called upon to treat gonorrhœa, has not witnessed sudden transition of the irritation from the urethra to distant parts, the ligaments and joints for example, where it has raged with a violence demanding the use of the most powerful antiphlogistics. In such cases the morbid phenomena scarcely perceptible in the original seat, have as speedily returned to it again whilst the affection of the other parts has ceased. Now, who will contend that the virus in these cases has been translated in the space of a few hours, first to distant parts possessing a very obscure and white circulation, and again in as short a time retreated to its primitive situation.

Such, however, is the force with which early impressions and associations are stamped upon the mind, that it is long before we begin to doubt, and still longer before we come to disbelieve in the existence of things and circumstances relative to which we have formed and long entertained distinct conceptions. It is just so with regard to the venereal virus. All who acknowledge its existence, and the number who do not hold with the hypothesis we are persuaded is at present extremely limited in this country, doubtless think that they have a clear idea and perfect knowledge of what it is. But should any of these set out with candour and something like mathematical scrutiny, in search of the object of their belief, we are greatly mistaken if they would not meet with more difficulty than they might imagine, in demonstrating to the external senses, any substance or matter produced

by venereal affections, so distinct in its nature and properties from ordinary animal secretions, as to deserve the appellation of *specific virus*, or bear a fair comparison with what are universally recognized as such, namely, those of small-pox and vaccination.

We propose, on another occasion, to continue our exposition of the subjects of M. Des Brus's treatise, promising to dwell more particularly upon those parts of it relating immediately to the practice founded upon the new doctrine.

E.

ART. XVI. *An Essay on the Ultimate Principles of Chemistry, Natural Philosophy, and Physiology, deduced from the Distribution of Matter into two Classes or Kinds, and from other Sources.* By LARDNER VANUXEM.—Part I. Octavo, 91 pp.—Philadelphia, 1827.—Carey, Lea and Carey.

THE theories presented by Professor VANUXEM in this essay, are founded, as the title announces, upon a distribution of matter into two distinct classes; and this distribution is proposed in the commencement of the work, with such an air of novelty, that an incautious reader might be led to suppose that it possessed some originality. This, however, is not the case; the proposed distinction being already adopted by all writers on chemistry. The two kinds of matter alluded to, are called by THOMSON, confinable and unconfinable; by DAVY, ponderable and ethereal; and by our author, concreting and non-concreting.

The general properties of these two classes are stated in the following extract:—

“As the one class of particles is known by its tendency to form concretions, or bodies, whose parts cohere together, and are tangible, we have attraction, or gravitation, as its inherent principle, or attribute: and as the other class of particles, on the contrary, exhibit no concretions, nothing tangible, we must conclude that repulsion, the antagonist power to gravitation or attraction, is the inherent principle, or attribute of the non-concreting class. It is in virtue of these two opposing principles or attributes, by which each class of particles is, as it were, held in equipoise or neutralization, when the two kinds of particles act upon each other, that the peculiar attributes belonging to each kind of particles, are enabled to come into action; from whence result all the phenomena which constitute the physical world.”

In all this there is certainly nothing new; nothing but what is already familiar to every student of chemistry. But in considering caloric as a cause of repulsion between the particles of ponderable